said computer being capable of performing said comparison [is performed] by computing for a selected test subarea of said exposed area the values (H_T, L_T) wherein H_T is a function of the attenuation of said x-rays at the higher energy band at said test subarea and L_T is a function of the attenuation of said x-rays at the lower energy band at said test subarea and computing for a subarea nearby said test subarea the values (H_B, L_B) wherein H_B is a function of the attenuation of said x-rays at the higher energy band at said nearby subarea and L_B is a function of the attenuation of said x-rays at the lower energy band at said nearby subarea, and employing said values (H_T, L_T) and (H_B,L_B) in determining the presence of said specific material.

~~34.~~ 15. (Twice amended) The device of claim 1, 2, 3, ~~15~~ 13 or ~~16~~ 14 further comprising [wherein said means to expose said area further comprises an x-ray source, means for generating from said source x-rays of at least two substantially different energy bands,] means for collimating a fan beam of said x-rays, and means for conveying said object to intercept said fan beam of said x-rays.

~~49.~~ 48. (Twice amended) A method of detecting a specific material that may be present in an ensemble of objects comprising the steps of

exposing an area of the ensemble to x-ray radiation of two substantially different energy bands,

Claim 2

80

detecting radiation passing through the ensemble and producing dual energy areal image information of said exposed ensemble, and

processing such dual energy information based on differences in attenuation between subareas of said exposed area to detect presence of said specific material by comparing selected subareas of said exposed area to other subareas in the vicinity of said selected subareas, [whereby]

said processing further including performing said comparison [is performed] by computing for a selected test subarea of said exposed area the values (H_T, L_T) wherein H_T is a function of the attenuation of said x-rays at the higher energy band at said test subarea and L_T is a function of the attenuation of said x-rays at the lower energy band at said test subarea and computing for a subarea nearby said test subarea the values (H_B, L_B) wherein H_B is a function of the attenuation of said x-rays at the higher energy band at said nearby subarea and L_B is a function of the attenuation of said x-rays at the lower energy band at said nearby subarea, and employing said values (H_T, L_T) and (H_B,L_B) in determining the presence of said specific material.

REMARKS

Applicants acknowledge with appreciation that the Examiner allowed claims 2 through 11, 13 through 33, 35, 38 through 48, 50 through 55, and 57 through 65. The Examiner rejected claims 1, 34, 37 and 49 under 35 U.S.C. §112 as